Beginners Guide
- selecting your own equipment

Updated September 2014

Introduction

When you get to the point of considering purchasing your own equipment you will find the range of options quite daunting at first. This guide is has been created off the back of the experience of recent Anchor Bowmen 'beginners' who have been through this process and learned a number of valuable lessons along the way. It is not a definitive guide, but it is hopefully helpful in steering you in an appropriate direction.

The best way to use the guide is to read it to get a basic understanding of the considerations and options and then seek the advice of some of the more experienced club members.

Many club members will be more than happy to show you their bows and other bits and pieces of kit. Often feel is the deciding factor on what best suits you and there is no substitute to looking at the different options, handling them and getting the opinions of people who use them.

The club has an equipment officer who is more than happy to help with any equipment choice advice or hooking you up with someone of appropriate experience.

Equipment officer at the time of writing: **Andy Harrison**.

Table of Contents

Main considerations

When should you get your own equipment?

This one is a little bit personal to the individual but there are a number of factors to consider:

1. Archery is all about repeatability.
   The more consistently you shoot, the better your score is likely to be. If you find that your constantly changing equipment e.g. having to use different bows each week or your sharing equipment (and every time you shoot the other person has moved the sight) then this will have an impact on your ability to develop. So at some point it is a good idea to get equipment that only you use and you can set up to your preference.
2. Archery equipment is not cheap.
   Around the minimum you can spend to get a 'new' basic bow kit including arrows is in the order of £120 to £150. At the other end of the scale it is possible to spend over £2000 on top of the range equipment. Therefore don't invest until you are sure it is worth it to you. Most people who try archery will recognise the point when they get bitten by the bug and want to continue.
   Typically we see around 30% to 50% of the beginners course members progress to joining the club. Whilst most people renew membership, some will after 6 months have decided that Archery is just not something they want to continue with.
3. Club equipment availability.
   The club holds a stock of around 25-30 trainer bows at a variety of limb weights (more on that later) and we run 2 training courses a year (typically September and February start). These bows have 2 purposes. Firstly they are to support the beginners courses and we have to prioritise their use by the new course members. When not in use on the course they can

be used by club members for a small hire fee each session. The size of the hire fee is at a level where someone shooting twice a week for a year will have paid as much as buying the same quality of equipment new. You will also notice when you see established members equipment that the club trainer bows are fairly basic. They will allow you to develop skills and build up the necessary muscles to move to higher weight bows, but at some point they will be a limitation on your scores.

So the best advice is: think about getting your own equipment when:

a. You're pretty sure that you will still be shooting in a years' time.
b. You're feeling limited by the club equipment.
c. You can afford the level of equipment you want or need.

For most people that will be some time in the 6 months after the end of the 10 week beginners course.

New or second hand?

This is mostly a question of affordability and personal choice. But you should consider the following:

Second hand:

The only thing you have to be careful of with second hand purchases is that some parts of your archery equipment are more prone to wear and tear damage than others so be careful when considering the following items, particularly for unseen internet purchases.

Arrows: are essentially prone to bending, denting and various other types of damage.

Limbs: if limbs have been abused (e.g. dry fired [fired without an arrow]) they can become damaged and new or aged limbs can become twisted and almost unusable. However, as you will read later limbs are one item that many people upgrade or grow out of. So there are a large number of 'good' second hand limbs on the market. Unfortunately as some of our club members have found there are also damaged and twisted limbs being sold.

Within the club you will find many members are upgrading equipment each year so there is often second hand equipment that people are looking to sell on or on some cases give away. It is always worth asking around at the club, or e-mailing the circulation list to see if what you are looking for is available.

New Purchases:

For some items of equipment like the riser (handle of the bow) and the limbs there is more of a 'feel' issue to consider. We each have different preferences and there is really no substitute to shooting the bow to see how it feels in the hand. Most of the professional archery shops have facilities for you to try the bow out before you purchase it to make sure it suits you. We would strongly recommend that you make use of this facility, particularly when considering purchasing in the mid to upper end of the price range. Mistakes at this price point are expensive.

1. ***So the best advice is:*** wherever possible make sure you get the chance to try a bow before you buy it and if buying second hand be sure that arrows and limbs especially are being sold

on for a good reason (outgrown or upgraded). Get to see used items if you can before parting with your cash.

Where to buy new equipment

There are a number of specialist archery shops and retailers scattered around the country and 2 within 30-40 minutes of Derby. Virtually all of them offer internet based sales and most will have some sort of shop for face to face sales. The staff are generally experienced archers and can provide good advice in most cases.

Shopping around can be an advantage on price. None of the retailers are universally the best on price for every item.

The January sales don't extend to archery shops. You will occasionally find deals on some equipment but it seems to depend on them having slow moving stock rather than any predictable 'sale' period.

Our two local shops are towards the bottom of the price range generally so you shouldn't go far wrong with them. Quite often the opportunity to see and feel the items can help you make a choice between the options.

For most items, expect to see the 'in shop' price being a little higher than the internet sales price to cover the cost of the staff providing the advice.

The two local shops are:

Merlin Archery : (Loughborough, 19 miles, 30 minutes from the Asterdale ground)

- http://www.merlinarchery.co.uk/
- Merlin has the advantage that its web site shows what is in stock

Custom built archery: (near Sherwood Forrest north of Nottingham, 29 miles, 50 minutes from the Asterdale ground)

- http://www.cbarchery.co.uk/

Some others that may be worth a look for on line purchases are:

- Bow Sports http://www.bowsports.com/index.html , also has a shop in Wolverhampton which is around 45 miles or an hour and 10 minutes away.
- Quicks: www.quicks**archery**.co.uk
- The Archery Shop*:* www.the**archeryshop**.co.uk
- Clickers: http://www.clickersarchery.co.uk/
- Ten Zone Targets: http://www.tenzonetargets.com/
- Aim Archery: http://www.aimarchery.biz/ (will sell individual ACE & X10 carbon/aluminium shafts)
- And there are more you can find with google…..

If you're visiting one of the local shops to get kitted out for the first time, be prepared to be there for well over 2 hours. Firstly they can get quite busy meaning you have to wait to get served and secondly the process of making all the choices, shooting a few shots and waiting for arrows to be

constructed can take a fair old while. Plan on half a day and treat it as a day out, especially at the weekend.

What level of equipment do I need?

Notice the use of the word NEED in this sections title! I will stick to describing what will actually make a real difference to your scores. What you WANT may be something bigger better and shinier than what you need. If that makes you feel better about your equipment and you can afford it then that's fine, but remember that the extra expense is unlikely to give you any better results.

First, consider what level you are aspiring to achieve in archery:

Senior open competitions, County, National or International level:

- All of these are characterised by the use of longer distances in the outdoor scored competitions
    - Gents: 100 yrds with a 122cm diameter target is the longest competition round
    - Ladies: 80 yrds with a 122cm diameter target is the longest competition round.

  In order to reach that distance with enough arrow weight and speed to cope with wind and rail (and even hail on some occasions) the bow has to have enough 'power' to push the arrow out at high speed. Most senior men will end up with around 40lb to 45lb of string pressure to hold whilst senior ladies will be more likely to be in the 35lb to 42lb range [Olympians are likely to be above this range, but they practice for 4 hours every day minimum!].

  Both gents and ladies will get advantages from 'faster' and 'smoother' limbs.

  Arrow weight and aerodynamics are also important. Fat heavy aluminium arrows generally won't get to the distance without putting the sight well above the target. Narrow light weight carbon fibre/aluminium composite arrows are pretty much the standard required to be competitive.

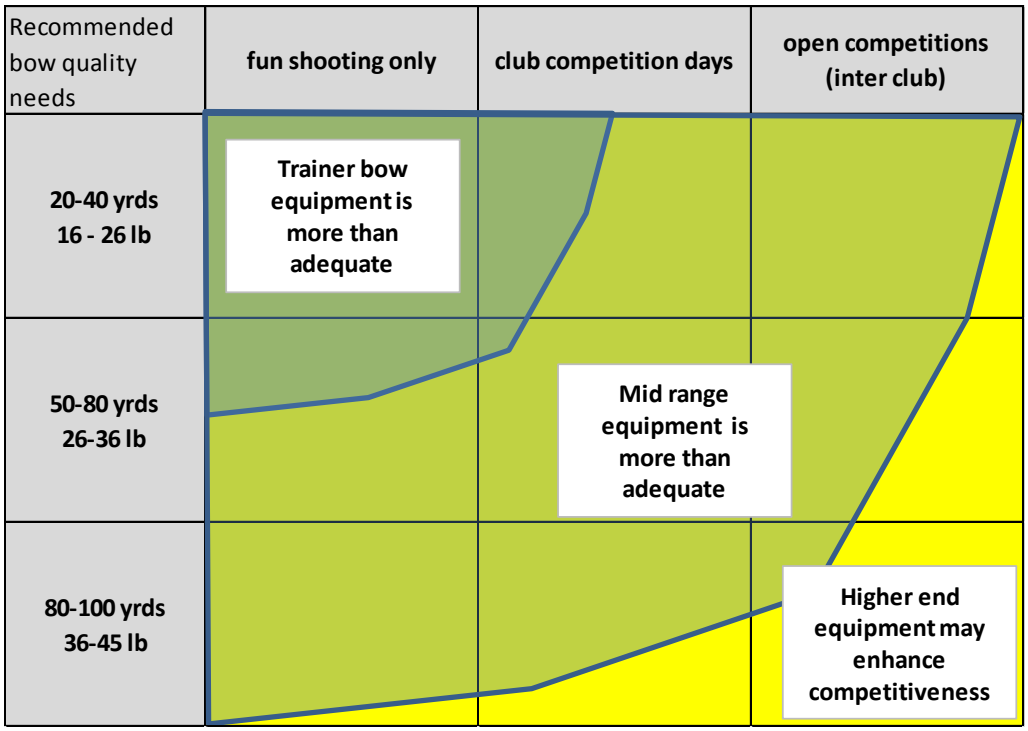
  The accuracy required also really demands the use of stabilisers and benefits from better riser stability and vibration characteristics.

Personal fun and enjoyment with or without serious competition:

- You can do this without having to achieve the longer distances. Indoors [winter season] the typical shooting distance is 18m or 20yrds with the occasional 30yrd shoot. Outdoors it can be 30-40yrds for the shorter distances. Both can be achieved with 16lb bows although accuracy can be helped with a little higher weight. Beyond 30lb of bow weight you're unlikely to see much benefit in scores at all.
- However, for most people the 'fun' in archery comes from improvement and one clear way of seeing that is to be able to hit targets that are ever further away. Most people will progress within the first year to 60yrds or more distance for which around 26-32lb of weight on the fingers is likely to be required.

Hopefully from the above you can set a goal: e.g. in a year I want to be shooting 60yrds and in 2 years 100yrds. That gives you a view of the sort of progression curve you might need in terms of bow 'weight'.

The following is a rule of thumb only for where you're likely to see any real benefit of better quality equipment:



So if you want to shoot 100yrds eventually but only see yourself shooting at the club rather than aiming to enter county or regional competitions → your likely to eventually want some mid level equipment to feel comfortable that your scores are down to you and not inferior equipment.

So now you get the big BUT as a beginner.

1. You can't learn to shoot well if you jump in at over 40lb of weight
    a. It will hurt
    b. You will develop incredibly bad form
    c. You will never shoot well
    d. You can brag about the weight of your bow (but not your scores)
    [note – the UK Olympic training programme makes experienced archers use ~20lb bows to learn better technique]
2. You can't jump too much weight at a time without destroying your form and risking injury.
    a. You will most likely be using bows between 18 and 24 lb on the beginners' course.
    b. Jumping 4 to 6 lb is possible at the lower end of the scale provided that you have the right level of basic muscle strength but remember that archery exercises muscles you probably never knew you had until you shot a few arrows.
    c. As you approach the 40lb mark jumps of 1lb and 2lb can prove to be quite challenging and take some getting used to.

3. Every significant change of weight means a change in limbs and more than likely arrows as the bendiness of the arrow has to match the bow (unless you enjoy seeing arrows fly almost sideways and bounce off the target).

For the cost conscious beginner it is worth thinking hard about your initial choice of equipment.

- Don't jump in at a weight higher than you can easily handle.
    - We have trainer bows from 18lb to 34lb at the club. Try several of these to find out where your comfort level lies. If you can't hold a bow at full draw for 30 seconds it is probably too heavy for you to shoot at your best.
    - You can continue to use the club bows for several months after finishing the course if you choose to. Use this opportunity to move up the weight levels gradually and find what you can comfortably manage. As we try not to use the higher weight bows in beginners' courses you will also find that these bows have less demand on them and will be available more often.
- For recurve bows with weight adjustment (all medium and high end risers) you can get about 10% or so of adjustment by altering the bolts that hold the limbs in place. So if you start off with limbs that give you 28lb you should be able to get this up to ~ 31lb just by adjustment. You could then look at ~33lb for the next set which would get up to ~36lb and finally 38lb which could be pushed up to ~ 42lb. That gives you the ability to progress in small increments developing the right muscles at a realistic rate whilst also developing form.
    - Beware that the beginners trainer bows (often described on web sites as take down bows) do not have a weight adjustment so make it harder to progress in sensible steps. If you can afford an adjustable weight riser it is recommended to choose one.

The upshot of which is that you should expect to work your way through a couple of sets of limbs before reaching your final weight level. So the moral of the story is don't buy top end limbs in the first instance as you are very likely to have outgrown them within 6 to 12 months. Because we have all followed a similar path you will also find that there are regularly 2nd hand, fairly new limbs available from other club members at a lot less than new prices.

The same goes for arrows. Stay as cheap as you can until you start to think of shooting more than 50yrds or at least try and time upgrading arrows with your next set of limbs. Again 2nd hand arrows are often available within the club.

For the other parts of your equipment you can choose to spend more at the beginning because you're a lot less likely to need to change them downstream. Tabs, sights and then risers are probably the elements of your first set of equipment that are most likely to be still in use in a few years if you select higher quality items and they are also the ones most likely to make any significant impact on your scores.

So the best advice is: don't push the boat out on your first limbs and arrows because you probably won't need them in a year. If you have budget for more than the basic set up spend it on a decent tab, a decent sight and a higher quality riser with adjustment. Any spare cash after that is probably best spent on upgrading pressure buttons and arrow rests.

How much should I spend?

1. Before you begin set a budget and stay within it.
   Living off baked beans because you spent all your cash on a bow will have more negative effect on your shooting (and the environment for your fellow archers) than the benefit of any equipment improvement. Around the minimum you can spend for a new beginners trainer bow with 8 arrows will be in the £120 to £150 range (2014 pricing). Whizz bang; go faster stripes; compete with the Olympic archers territory is circa £2,000. Most people will find that something in the £200-£500 range will easily meet their needs for many years.
2. Only buy what you need.
   Depending on your level of skill and ambition you can divide the equipment options into essential, preferred or optional (we try and do that for you later). Don't exceed your budget buying the optional items. They are best saved for Christmas and Birthdays when you're short of things to ask for as presents.
3. Allocate your budget on the right items.
   If you absolutely have to spend more than the minimum amount [embarrassingly large bank account, tax avoidance, vanity, etc.] then there are better components of your archery kit to invest in that others. The golden rule is invest in the things you are convinced you will still have after a couple of years of development.
   Anecdote: *whilst writing this I am reflecting on the fact that in 2 years of archery I am on my second riser, 4th set of limbs, 7th set of arrows and, 2nd tab. Now that's an extreme case as I have moved from 26lb limbs on the beginners course up to 45lb for serious competition fairly rapidly, but if asked would I have bought 'cheaper' items in the beginning if I had known that I wouldn't be using them long then the answer would be a resounding YES.*

So the best advice is: set a budget and stick to it. Some items you don't need right away, others your likely to change so should stick to cheap and cheerful. Then there are some items where buying better quality from the beginning will save you cash in the long run, as long as you can afford it.

Sizing considerations

Bows come in different sizes and its best if you have a bow that suits you. The choice of bow size is a simple one of geometry. We really want to have the same angle of string at full draw for most archers. The further back you pull the string the bigger the bow needs to be to keep the same angle.

So step 1 is to work out what your 'ideal draw length' is. This is a slightly odd measurement and it is not the same as the amount the back of the arrow will actually be drawn back! Don't worry about that though as there are 2 methods to get the right number.

1) The wingspan method: Stick your arms out horizontally to form a T shape flat against a wall. Get someone to measure the distance between the finger tips on each hand and divide by 2.5. That's close enough for a beginner recurve archer.
   a. For me my 'span' is 71 inches so my draw length should be approximately 28.5 inches.
2) The second method which is more accurate requires the help of an experienced archer. You first draw a bow and get your body position right. Your rear elbow should be in a straight line behind your bow hand and string hand. This is not always easy for a beginner to achieve which is why you need the experienced archer to check it for you. We then measure the

length of the arrow from the knock (string) to the arrow rest/button/handle throat [which are all typically in a similar position horizontally on a bow]. Then you add 1 ¾ inches.

a. For me this measurement has grown from 28.5 up to 29.5 as my technique has developed over 2 years.

Whichever method you use is OK to move onto the process of selecting a bow size. The attached chart suggests the best bow length to match your draw length.

Bow size selection:

Draw length of: 14" to 16" = 48" Bow length
Draw length of: 17" to 20" = 54" Bow length
Draw length of: 20" to 22" = 58" Bow length
Draw length of: 22" to 24" = 62" bow length
Draw length of: 24" to 26" = 64" to 66" bow length
Draw length of: 26" to 28" = 66" to 68" bow length
Draw length of: 28" to 30" = 68" to 70" bow length
Draw length of: 31" and longer = 70" to 72" bow length

For juniors you may want to select a length with a bit of growth room initially or you can plan to grow the bow when you change limbs in the future.

Arrow size selection:

Firstly you MUST select an arrow length that is safe. You want one that you can't pull back far enough to fall off the rest and onto your hand *[letting go at that point will result in a rush trip to the City Hospital and some eye-watering face-book photos].*

You should avoid buying or using arrows that are shorter than your draw length measurement (which should leave 1 ¾ inches of arrow beyond the rest at full draw).

Even better if you leave some growth room on your first set. You may well find that your eventual draw length grows up to an inch above your initial measurement.

A good rule of thumb is to go for arrows 1 inch longer than your draw length measurement for your first set. One additional advantage of this is that 'long' arrows can be shortened to increase their stiffness as you increase limb weight and may save you buying a new set in the future.

So the best advice is: get an experienced archer to help you measure your draw length. Make sure you go for the right size of bow and the right minimum length of arrow. Your first set of arrows should be an inch longer than your measured draw length.

Buying Guidance Summary

1. Think about getting your own equipment when:
    a. You're pretty sure that you will still be shooting in a years' time.
    b. You're feeling limited by the club equipment.
    c. You can afford the level of equipment you want or need.

    For most people that tends to be in the 6 months after leaving the beginners course and joining as a full club member.

2. Wherever possible make sure you get the chance to try a bow before you buy it and if buying second hand be sure that arrows and limbs especially are being sold on for a good reason (outgrown or upgraded). Get to see used items if you can before parting with your cash.
3. Don't push the boat out on your first limbs and arrows because you probably won't need them in a year. If you have budget for more than the basic set up spend it on a decent tab, a decent sight and a higher quality riser with adjustment. Any spare cash after that is probably best spent on upgrading pressure buttons and arrow rests.
4. Set a budget and stick to it. Some items you don't need right away, others your likely to change so should stick to cheap and cheerful and then there are some items where buying better quality from the beginning will save you cash in the long run as long as you can afford it.
5. Get an experienced archer to help you measure your draw length. Make sure you go for the right size of bow and the right minimum length of arrow. Your first set of arrows should be at least an inch longer than your measured draw length.
6. Be sure to let other club members know what you're thinking of buying. At worst you will get some good advice, at best you may find it is available 2nd hand or on loan from another archer.

The Equipment List

The following pages contain the list of items you might think about buying. Whilst it may mention specific sources and product names it is not a recommendation for any particular retailer nor is it recommending any particular make or brand of item. The table for each item provides examples of low, mid and high end choices, but you will find that there are generally selections of brands in the same price bracket and shopping around at the time you're purchasing can yield significant savings. I have tried to pull out some of the key features you should consider in making your choice of a particular item.

One thing to note about the retailers is that they all generally have an online ordering or in shop sales support. Most will charge a higher price for in store service, but on the other hand you get the benefit of their advice and the chance to try out the equipment. The cost of driving to our two local retailers Merlin Archery (Loughborough) & Custom Built Archery (near Sherwood Forrest) is roughly the same as the postage price for smaller deliveries so the on line price can save you a substantial amount if you know exactly what you want.

p.s. whilst you can buy 'bows' from other retailers that do general sports equipment we would not recommend it. It tends to be very cheap and inadequate. Stick to the established Archery specialists or second hand market.

Checklist for equipment

Use the following checklist as a prompt to consider what equipment you really need. The following sections provide more description about what to look for when selecting the make and model for each item.

Minimum items you really need:

Item	Left/Right Hand matters?	1st equipment – price point?
Riser (or bow handle)	Yes	What you can afford – quality counts
Limbs		Cheap & Cheerful – you will have to change them as you develop and want to shoot longer distances
String		Cheap & Cheerful
Sight	Yes (on some models)	What you can afford – quality counts up to a point
Pressure Button		Medium quality
Arrow rest	Yes	Medium quality
Arrows		Cheap & Cheerful – you will
Stringer		Cheap & Cheerful
Arm Guard		Cheap & Cheerful
Finger Tab	Yes	~ £10+ big impact on your shooting consistency
Archery bag		Cheap & Cheerful
Arrow Case		Cheap & Cheerful
Quiver	Yes	Medium – with pockets
Arrow Puller		Cheap & Cheerful
Bow Stand		Cheap & Cheerful

Additional items that will help improve your form

Item	Left/Right Hand matters?	1st equipment – price point?
Long Rod Stabiliser		What you can afford
Finger or Wrist sling		Cheap & Cheerful
Clicker		Cheap & Cheerful
Brace gauge		Cheap & Cheerful
Chest Guard	Yes	Cheap & Cheerful

Other items you may decide that you need eventually if you get really hooked on the sport (e.g. bow & arrow maintenance).

Item	Left/Right Hand matters?	1st equipment – price point?
Fletching Jig		Cheap but reasonable quality
Stabiliser side bars		What you can afford
Telescope/Binoculars		What you can afford
Tripod		What you can afford

Minimum Essential Equipment

Riser (or bow handle)

The riser controls the stability of the bow in the hand and keeps the limbs aligned properly throughout the shot. They come in a variety of lengths that impact the overall length of the bow.

A 25 inch riser is typical for an adult gent but 27 inch risers can be found for those needing a particularly long bow and 23 inch risers are commonly available for juniors and smaller ladies. A 25 inch riser matched with medium length limbs will give you a 68 inch bow overall. Limbs generally come in 2 inch increments so short limbs would give a bow length 2 inches shorter than medium limbs.

Quality does count, but what you get for what you pay is really optimum in the mid-range risers available. Changing from a mid to high end riser will not improve your scores unless you are approaching international standard.

Look for a design that is not too heavy in the hand, feels nice to hold and has good adjustment capability (limb alignment and limb weight). Riser choice is often one of 'feel' rather than features so see how many risers your fellow archers will let you handle on a practice night. If you are buying from a shop ask to try a couple of risers out. Most of our local shops are more than happy to let you do this.

Be aware that the actual draw weight of a bow is affected by the riser. In some makes the quoted limb weights are achieved at the bottom of the adjustment range, for others it is in the middle of the range. That's not an issue for your first purchase but be aware that changing risers in the future could change the draw weight of your existing limbs.

The make and model of the riser affects the compatibility with different limbs. There are really 3 main systems you will come across.

1) The ILF or International Limb Fitting. This is a standard that exists across manufacturers and will allow you to put Hoyt Limbs onto a Sebastian Flute riser and vice versa. It gives the greatest flexibility for upgrading limbs and getting e-bay bargains.
2) The Hoyt 'Formula' system is bespoke to the Hoyt brand, so if you buy a Formula riser you have locked yourself into a limited range of limb manufacturers and options. There are some other limb manufacturers who offer compatible limbs such as Border archery and Uukha, but you're talking seriously expensive limbs. Hoyt claim some advantages of the formula system so you just need to be aware that all limbs don't fit on all risers.
3) The simple fixed limb system you have seen on the club trainer bows. These have no adjustment capability, just a simple screw bolt through a hole in the limb. On internet web sites these are often labelled as 'take-down' bows and tend to be firmly in the low cost end of the riser range. If you can afford to move out of this level of riser then you should. The other two systems will give you access to a wider range of far superior limbs and will allow you to use your first riser for much longer.

Almost all risers will have mounting positions for a pressure button, clicker and a stabiliser system (see later). If you are shopping at the cheaper end of the scale try and make sure the riser has these basic features.

Low end example	Mid-Range Example	High end Example
		
SF Optimo+ Riser. Simple fixed limb fitting from several retailers including Merlin Archery & Custom Built Archery locally ~£26	Hoyt Grand Prix Horizon (ILS standard limb fitting); Win & Win Rapido (ILS standard limb fitting) ~£120-£350 range	Hoyt Formula HPX (formula limb fitting compatible) and the Win & Win Inno CXT (ILF limb compatible) ~ £350 - £550 range

Best beginners entry point

Limbs

Limbs are one of those components that have a huge range of technology levels, performance and feel. They are also one of the prime areas for marketing hype.

Don't worry too much about what materials they are made of. The things that make the real difference to you are:

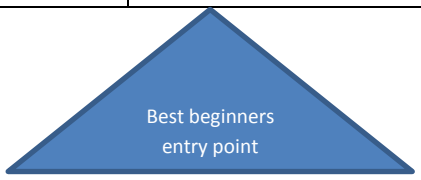
- The fitting type. It has to be compatible with the fitting style of your riser.
- The 'speed' of the limbs which, for limbs of supposedly the same bow weight can lead to different amounts of arrow speed. i.e. you can throw an arrow further with 'fast' limbs without having to hold more weight on your fingers.
- The stability of the limb – this effects how much your releases actually effect the string and the arrow. More stable limbs should be more forgiving of bad releases.
- The weight of the limbs – this is the 'weight' that you will feel on your fingers. Unfortunately it gets a bit complicated here.
    - Limbs are 'rated' at a weight in a bow if the draw length was 28 inches. For every inch over 28 you pull you have to pull harder, for every inch less you can pull less hard. So if your draw length is below 28 inches you will feel a lower weight than the marked level.
    - The length of the riser will also have an effect. Limbs will be marked with different weights for different bow lengths. If you put the limbs on a shorter riser they will be harder to pull back to the same draw length.
    - The settings of your riser adjustment bolts will typically allow a 10% range of weight. However the design of the riser may mean that this is 90% to 100%, 95% to 105% or 100% to 110%.
- The smoothness of the limbs. This is particularly important at the end of the draw. With many limbs there is a point in the draw length where the force required to get another inch of movement suddenly gets bigger. This is called the stacking point and for those with longer draws (30 inches or more) can be a problem. Most people don't want to feel the weight of the bow suddenly get higher as they approach full draw.

Now you will find that 'speed' of the limbs and the 'stability' are talked about a lot in the marketing literature. Unfortunately there is no standard measure of these things so it is completely open to marketing hype. The weight and smoothness are specific to your riser choice, draw length, strength and preference.

The best option you have is to get the opinion of people who have shot different limbs and most importantly try them yourself. 2 makes of limb marked at the same weight could feel completely different when you draw them in your riser. Only you will know which feels better to you.

And remember, you're likely to want to change your first set of limbs within a year so don't spend a fortune.

Low end example	Mid-Range Example	High end Example
		
Simple take-down fitting style – only suitable for basic trainer bow risers. Will not fit most risers. £29	Mid range limbs – ILF and Formula fitting standards are available from a range of manufacturers. ~£50-£250	High end limbs – ILF and Formula fitting standards are available from a variety of manufacturers, materials and technologies. ~£250 - £700

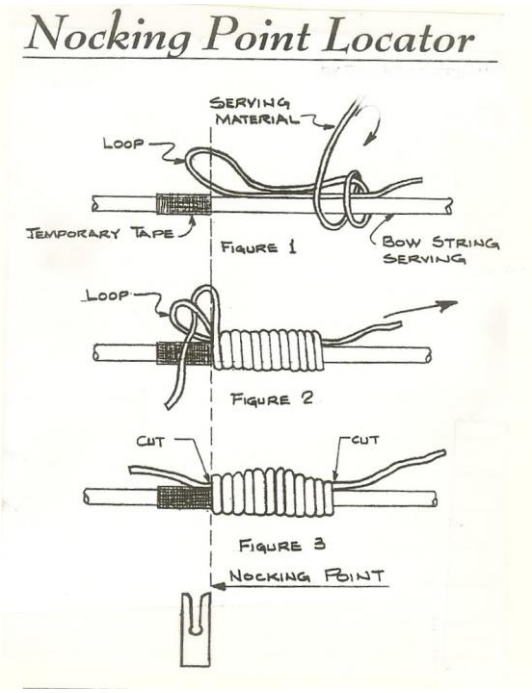


String

Strings come in several materials, colours and numbers of strands. Until you reach serious competition level its unlikely to matter what you choose performance wise. As strings will naturally wear out over a year or two you can always try alternative materials later. The string can have a small effect on bow tuning but there are far more significant items in the equation.

They do however come in different lengths so make sure you buy one that matches your bow length. If you have a 68 inch bow you need to ask for a 68 inch string (the string is not actually 68 inches long by the way, it just fits a 68 inch bow). The colour choice is entirely down to you. The arrows won't know the difference!

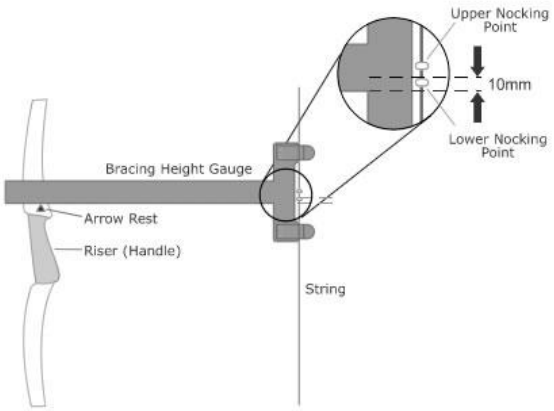
One thing to watch out for is the nocking point. When you buy most strings off the shelf or over the internet they will not come with a nocking point fitted. That's largely because you have to put it on in the right place to suit your style and your bow set up. You can fit your own nocking point quite easily. Some club members prefer the masking tape method where you use two thin (~5mm) strips of masking tape rolled around the string. Others prefer the tied variety where you can use serving thread (if you have it) or cotton or dental floss to create the nocking points. There are a few u-tube videos on the web to show you how to do this but they can be a little hard to follow. If you ask at the club someone is likely to be there who can show you one of the tied methods.



We don't recommend the brass nocking points beyond the beginners course as moving the nocking point is an essential part of the bow tuning process and brass nocks add excess weight to your string.

The tied method(s) (see right for one variant of the theme) gives you the best capability to adjust the nocking point once the nock is in place (you can spin the nocking point on the string and it will be guided by the serving material up or down the string).

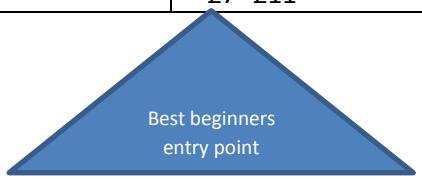
If you're setting your nocking points for the first time the top of the bottom one should be between 3-10mm above the arrow rest (around 5mm is a good first stab). You will need access to a brace square tool to do this accurately (see later). Almost all of the experienced archers have one of these so if you don't just ask and someone will help you out. This is just the starting point and you will need to adjust it for the best arrow flight you can get.



If your physically buying your bow from an archery shop (not on-line) then they will most likely put a nocking point on for you if you ask.

Tuning your nocking point is a whole new topic and I strongly suggest you ask one of the experienced club members to help you through this. There are several tuning guides available on the internet though.

Low end example	Mid-Range Example	High end Example
		
Dacron strings – lower durability than other materials and a bit heavier which slightly reduces arrow speed. £4	Fast flight arrow strings – faster and more durable than Dacron and available in colours. 2 colour twisted strings cost more ~ £7- £11	Custom strings – alternative materials e.g. 1025 & 1090 and fancy colour schemes. ~£12-£20



Sight

The sight is one of those components that you will adjust the most in archery and it therefore has the potential to make your life very frustrating if you choose one with fiddly adjustments. You have probably already felt the frustration of the club learner bows when you loosen the finger screw and forget what setting it was on and where you need to move it to. Or even worse you wonder why you're shooting high until you notice the sight is gradually sliding down of its own accord!

It's also a component that if you choose well will be on your bow for many years as you should have no need to change it.

Look for micro adjustment using a click wheel as a minimum. With these types you loosen the lock and then adjust the position by rotating a fine adjustment wheel. Large movements up and down will be needed for any change in target distance so make sure the sight has an easy gross adjustment system.

Look for how rigid the sight block is when you have put it in position – it should not vibrate or wobble about once set. This is one of those components where if you physically handle it and adjust it you can generally feel the quality of the engineering. If it feels solid and precise it's probably a good sight. If it feels fiddly, sticky or wobbly it's probably going to annoy you eventually. If you can afford it, buy a better one.

You're probably going to need around a 10 cm vertical sight movement and 1 cm of horizontal movement which is standard on most sights.

If you're buying for a recurve bow just be aware that sights come in recurve and compound bow varieties and that on many designs you have to specify if you need a right or left hand variant. Stick with the recurve types as the compound variety is sometimes difficult to fit in the right position.

The other thing that varies a little between sight designs is how far in towards the riser you can move the sight. If you can, find one that gives you the freedom to move the sight all the way in to the riser as this will help you get to slightly longer distance targets.

Low end example	Mid-Range Example	High end Example
 Low end sights – typically lack the Vernier wheel adjustment and therefore fine control required for longer distances ~£10-20	 Mid range sights have Vernier adjustment in both vertical and horizontal but may lack a bit of the high quality feel or robustness. ~£20-£80	 High end sights offer finer adjustment, smoother travel, more durability etc. £90-£350

Pressure Button

The pressure button provides the cushion against which the arrow pushes when you first release the string. In bow tuning we use the button to align the arrow relative to the line of the limbs (centre shot) and to correct for slight mismatches in the arrow stiffness relative to ideal. So you're basically going to adjust it during tuning and then hopefully leave it alone the vast majority of the time.

You are looking for a smooth movement of the button, adjustability of the button depth and tension. The difference between mid and high end buttons is largely a little bit more smoothness of movement and easier, wider and more repeatable adjustment (e.g. having a scale to record the 'perfect' setting, or lots of alternative springs and spare plungers).

Unless you're an endless tweeker, a mid-range button will be more than adequate for many years.

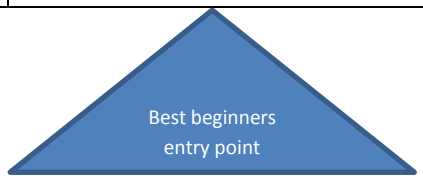
Some of the high end buttons do require you to select the right length for your riser whilst most of the low/mid-range buttons are one size fits all.

Low end example	Mid-Range Example	High end Example
		
Cheaper buttons look like the mid range but tend to be generally lower quality and a bit prone to 'sticky' movement after they start to wear. Adequate but not ideal. ~£7 -£10	The Shibuya button is the general default choice if you can afford it. Adjustment requires loosening of grub screws but is fairly simple, if a little fiddly. Should last several years. ~£23-£40	The Beiter button has tended to dominate the high end standard although there is now more competition in this price range. Look for ease of use and adjustment and the ultimate smoothness standard of button movement. ~£80-£85

Arrow rest

Ideally an arrow rest should be adjustable both vertically and horizontally to allow you to get different diameter arrows to sit in the right place against the button without the arm protruding beyond the arrow shaft. This minimises the potential for the fletching of the arrow to catch on the arrow rest as it leaves the bow and allows the button to do its job effectively. The flip style rests have a wire arm that moves out of the way of the fletching and returns to position after the arrow has gone.

Low end example	Mid-Range Example	High end Example
 Simple Plastic rest, no adjustment £1-2	 Simple flip arm magnetic rest (vertical adjustment only) ~£10	 Precision Magnetic flip arm rest (choice of colours and adjustable in horizontal and vertical planes) £25



Arrows

Arrows come in all sorts of shapes and sizes and your choice will depend to some extent on what type of shooting you want to do. The archery shops will sell fully built arrows to your length choice or they will sell the components and you can build your own. Most people start with pre-assembled for the first set or two and may then move onto building their own if they have the confidence and equipment.

Initially the critical factors in choosing an arrow are:

1. Safety – it must be above <u>your</u> safe minimum length (your draw length + 1 inch is a good starting point for a first set)
2. Cost – if your still moving up the draw weights then you're likely to have to change arrows in the future so don't break the bank.
3. Spine – the 'stiffness' of the arrow must match your bow if you want arrows that fly in a straight line
4. Weight – as lighter arrows go further as a general rule
5. Aesthetics – you can bling up your arrows in various ways to make them 'yours'
6. Durability – as arrows get more expensive there are some choices you can make to help them survive a little bit longer in use.

If you looking for indoor (short range) arrows then weight is not an issue for bows above say 24-26lb. Your score will marginally benefit from having 'fat' arrows as you will get more line cutters earning the higher score. Aluminium arrows are the normal choice here even for the very best archers.

Outdoor and especially as you push up the shooting distance the weight of the arrow becomes critical to being able to get to the target before you run out of room to move your sight. If you're shooting the club trainer bows and the club aluminium arrows you will hopefully have a feel for how far you can get an arrow at a given bow draw weight. The size and shape of your face as well as your shooting style also play a part so it is not possible to be definitive about what combination of limbs and arrows will reach certain distances. Therefore please take the following as a pure outline guide – you may prove to be different.

- Up to 50 or 60 yrds aluminium arrows should work, but you may find you will have to aim above the target to get a hit.
- From 60 yrds and above life is vastly easier with aluminium/carbon arrows
    - For 80 yrds you will most likely need to be shooting with 32-36lb on the fingers though
    - For 100 yrds you may need 36-42lb to get there
- Aerodynamics do play a part and the thinner shaft of the aluminium/carbon arrows helps. The very high end arrows also have 'barrelling' where the diameter at the front and back of the shaft is thinner to assist the range and resistance to wind.

The other consideration is how easy will your arrows be to find when you put them in the grass (which you will and often). Carbon arrows come in 2 forms; pure carbon shafts which our metal detectors won't find and carbon/aluminium which they will find. When you see how often we go searching with the detectors (every outdoor session) you will see why we don't like all carbon shafts. This is especially important as we share our facilities with football and rugby clubs so we have to find

every single lost arrow, no matter how long it takes us. ***If you choose a carbon arrow please make sure it's a carbon/aluminium composite.***

The lower priced arrows can generally be bought individually. At the higher price range they generally come in matched sets of 12. There are however some select archery shops who will supply even the top end arrows in individual shafts.

As typical competition requires 6 arrows and you will need a spare or two the minimum number of arrows you should consider buying is 8. A dozen arrows is the normal purchase quantity.

So what should you buy for a first set of arrows?

The best bet for the majority of archers is to invest in a cheap aluminium arrow set. If you're only going to use them indoors then you can safely select fletching's over 2 inches long. If you want to use them indoors and at the start of your outdoor archery career stick with 1.75 to 2 inch fletches (if you have the choice).

Use one of the fully assembled arrow options most archery shops provide.

- Choose a price range that suits your pocket (cheap is fine)
- Select the length (your draw length + 1 inch for beginners)
- Select a spine that matches your bow poundage from the selection charts, or if you provide the arrow length and poundage to the shop they will normally work this out for you. The first time you use the selection charts get the advice/help of an experienced archer. To find the latest spine charts search for ***Eastern spine chart*** on google.

If you desperately want to shoot longer distances outdoors then you could look at carbon/aluminium arrows but don't take this step until the outdoor season starts and you're not imminently about to upgrade your draw weight.

I have included an appendix later covering the details of selecting points, nocks and fletching for those building their own arrows or looking to get a custom set made up by an archery shop.

Fletchings will need repair, whichever type you choose. They will get damaged in use so make sure you get some spares at the time you get your arrows.

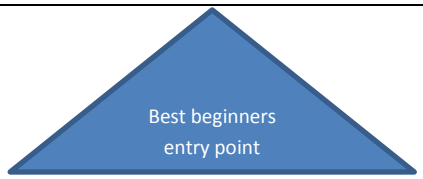
Low end example	Mid-Range Example	High end Example
 Aluminium indoor arrows start at around £50 for a set of 12 arrows (e.g. JAZZ) and can be bought individually. More expensive aluminium arrows typically have better quality nocking location and better uniformity. ~£50 - £112	 ACC's are the normal entry point for carbon/ Aluminium arrows at around £120 per dozen. Slightly lighter and more aerodynamic options are available with the ACG shaft at the upper end of this price bracket. ~£120-£175	 Aerodynamically shaped carbon/aluminium composite arrows start with the ACE shaft from Easton at £243 for a set of 12 assembled arrows up to £325 for Eastern X10's. You can even add a further £100 to upgrade the points to tungsten on the X10. ~£240-£425 for a set of 12

Best beginners entry point

Stringer

Keep it nice and simple – all stringers do pretty much the same job at a similar price point. The string ones can tend to get tangled up in your bag so you may find the webbing designs slightly more user friendly.

Low end example	Mid-Range Example	High end Example
	  ~ £4-5	



Arm Guard

Armguards come in different sizes, colours and materials.

As a beginner bigger is often better (until you learn where on your arm you need to protect).

Plastic will allow the string to slide better (less string wear) and won't wear out as quickly as a fabric guard. However watch out for the designs where the strap is exposed above the plastic as you can find the strap wearing through as the string hits it.

The type of fastening is probably a major selection point. It's surprising how quickly you get tired of fighting four fiddly fasteners when the alternative is slipping 2 pieces of elastic over your wrist.

Low end example	Mid-Range Example	High end Example
 Simple fabric guard – functional but will wear where the string hits ~£4	  Longer length guards for greater protection or simple plastic guards which may be prone to strap wear or breaking at the strap fixing points. ~£6-£10	  There are a variety of sizes and shapes of plastic guards. The best have a continuous loop of elastic, protected from string rubs. But they tend to be smaller and you need to know where on your arm you need them! £7-£11

Best beginners entry point

Finger Tab

Your finger tab is one of those items that can surprisingly have the most impact on a beginners archery scores.

You have to remember that the consistency of rear hand position on the face is critical to aim. You want a tab that encourages consistency in both vertical and horizontal position. This tends to be somewhat personal to the individual so the best starting point is to go with a quality tab that has some flexibility for you to experiment.

Some types have removable little finger hooks, removable and adjustable shelves etc that allow you to try different positions for your thumb.

You want to make sure your tab includes a finger spacer. You know that feeling where every time you get near to full draw the arrow jumps off the rest? That's because you have pinched the nock of the arrow between your fingers. The spacer helps to prevent this.

You want the best quality leather you can get as this allows the string to slip more easily off the tab. Cordovan leather is the benchmark standard. The thickness of the leather will effect how much the string puts pressure on your fingers. Thicker leather will give you less feel but more protection.

Tabs come in different sizes – get one that fits you properly. That means try it on the hand if you can and select the one that sits firmly in place and feels comfortable.

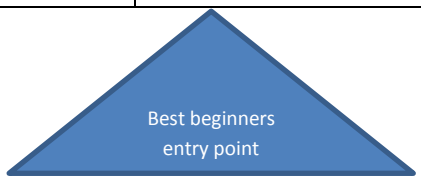
Tabs can be vastly different weights. Some people like the feel of a heavy tab, others don't.

Low end example	Mid-Range Example	High end Example
		
Simple leather tab lacks any features to assist in hand positioning. Simple platform tabs help with vertical position only as you place the platform under the jaw ~£1-£8	Basic adjustable tabs with removable/adjustable finger spacer, platform and finger hook ~£6-15	Similar to mid-range examples but with higher quality materials or heavier weight designs £30-£50

Archery Bag

It is surprising how quickly you gain bits and pieces of archery equipment. It is worth getting a bag at the beginning to keep them in and for getting to and from the indoor and outdoor venues. Consider how far you're likely to be carrying your equipment. Rucksack types are probably most use if you're planning on visiting any competitions where you may not be able to park close to the shooting area. Look for a bag that will hold your arrow case or tube. Some bags come with a case/tube included. If you buy a robust bag at the start it will last a fair while.

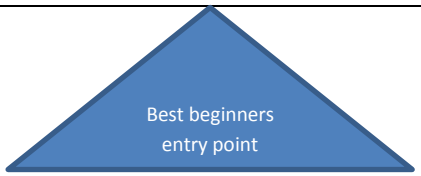
Low end example	Mid-Range Example	High end Example
		
Simple bags and hard cases (as we use for the club trainer bows) ~£10-£25	More elaborate bags and rucksacks ~ £30-£70	High end wheeled Hard cases & the Ferrari's of rucksacks and hand bags. ~£70 and upwards



Arrow Case

To keep your arrows together and in good condition some type of arrow case is advisable. Fletchings are easily damaged if the arrows are left to float around the boot of the car or in the bag with the rest of your equipment. The simple tube types are perfectly adequate, or if you prefer to see arrows laid out nice and neatly an arrow case with foam separators should do the trick.

Low end example	Mid-Range Example	High end Example
 Simple Arrow tubes – telescopic to accommodate different length arrows. Easily hold a dozen arrows. ~£7-£10		 Arrow cases tend to be slightly more expensive than simple tubes and can take more room in your bag ~£12-£20

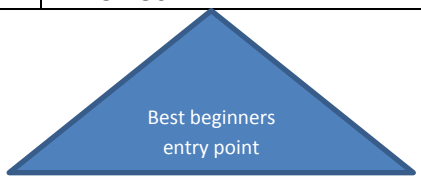


Quiver

You need a quiver to hold the essential equipment you will take to the shooting line.

The ability to hold 8 or 9 arrows (6 for competition and 2-3 spares), your finger tab, arm guard, arrow puller, note book (for the sight marks you're bound to start recording), pen(s) and any 'tweeking' tools such as Allen keys etc. So provided it has pockets for bits and pieces and a place for arrows the rest is down to aesthetics and comfort of fit.

Low end example	Mid-Range Example	High end Example
		
Simple arrow holder with minimal pockets ~£5-£10	More pockets and storage areas ~£15-£30	Even more bling or branding. ~£30-£60



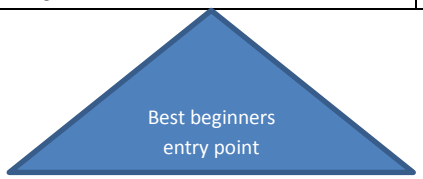
Bow Stand

Bow stands are basically to keep your bow out of the mud on the field and free from unnecessary scratches on the limbs from indoor use. Pretty much any of them will achieve this but some useful extra features to look for are:

- Easy to fold/extend legs so that the stand can be quickly set up and put away in your bag.
- A ground spike- normally a screw in prong that can be used on the field and secures the stand into the ground for those all too frequent windy days.
- Some stands allow the bow to be placed with the long rod pointing down towards the ground at 30-45 degrees (see High end illustration). This is useful on the odd occasion when you need to check limb alignment but the back of a deckchair also does a pretty good job.

The very cheap ones work, but a more robust design will last longer before it wears out.

Low end example	Mid-Range Example	High end Example
 Simple bow stand ~£5-£10	 More robust design with stronger legs and stem £10 - £17	 Design with side arm allowing the bow to be rested in a way that allows limb and centre shot alignment checks. ~£17-25

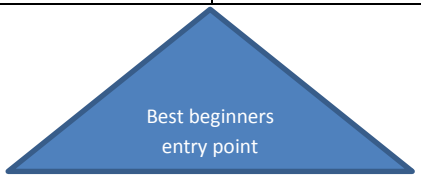


Arrow Puller

Unfortunately the higher the poundage of your bow and the thinner your arrows the harder they can be to pull out of the boss. An arrow puller simply gives you more grip. Choose a design that feels nice in the hand and try to get rubber that feels 'grippy'.

Having just returned from a competition at which we needed 3 people all with arrow pullers to get my arrows out of a particularly unhelpful boss I consider it an essential tool.

Low end example	Mid-Range Example	High end Example
 Very simple folding arrow puller ~£3-£5	 Slightly easier to grip in the hand ~£6-£10	 Arrow Jack puller – for getting out the arrows that just refuse to budge with any other method. E.g. when you impale a wooden stand leg. (I don't know anyone who has one of these though – but we may invest in one as a club) ~£112



Recommended Equipment

Long Rod Stabiliser

Archery is essentially about accuracy. The long rod is one of those attachments that really does make a difference to how stable the bow is in the hand. If it's within your budget add one as soon as you can, ideally when you buy your first bow.

It does this by holding additional weight out at a distance from the riser. The effect of the weight is that it makes it harder for the bow to twist in the hand. The typical design has a basic rod with the ability to add additional weights to the end away from the riser. They are available in a variety of lengths and have a common thread fitting making them compatible with the vast majority of risers.

If you have a poor release or poor positioning of the riser in the hand then the bow can 'kick' left, right, up or down when you release the string. The long rod reduces this effect. The same is also true as your trying to aim the bow. The long rod helps to slow down the movement of the bow making aiming easier. The more weight you add to the end the greater the effect.

The ideal long rod would have a rod of zero weight holding a weight out as far as possible from the bow. In the real world however, the rod will never be zero weight so the longer it is the more it weighs. The choice of a long rod is therefore a compromise between the total weight added to the bow (that you will have to hold up at arms length) and the stabilisation effect. That means that your personal strength plays a factor in your choice.

Long rods come in a large range of prices. One thing to consider in choosing a price point is that when you choose to add the side rods to your stabiliser it will cost at least as much again as you spend on the long rod.

There are a number of factors that drive the cost of different designs:

- Lower weight rods allowing more weight to be added to the end are more expensive
- Novel designs and 'premium branded' rods are more expensive
- Some designs claim to have vibration damping capabilities
- Some designs claim to reduce the wind drag that a basic long rod adds. This could have some advantages when shooting in blustery conditions.

The club has a collection of stabiliser rods that you can use to try out different rod and weight combinations. We suggest you make use of this to get a better idea of what length and weight of rod feels right for you.

You have the choice to add a damper to the end of the long rod if you wish as an optional accessory (at extra cost).

Low end example	Mid-Range Example	High end Example
 Simple carbon fibre long rod ~£20-£30 Add ~£10-£15 for end weights Add ~£10 for an end damper	 More sophisticated designs claiming vibration damping, total weight and/or wind resistance benefits ~£30-£90 Add ~£15-£25 for end weights Add ~£10-£15 for an end damper	 Top end tubular long rods and more exotic elliptical profile designs ~£90-£130 Add ~£15-£30 for end weights Add ~£15-£20 for an end damper

Best beginners entry point

Finger or Wrist sling

In the ideal shot you don't actually grip the riser handle. With a long rod in place the bow should roll out of the hand as the long rod weight pulls downward. The finger sling or wrist string is there only to stop the whole bow falling to the floor.

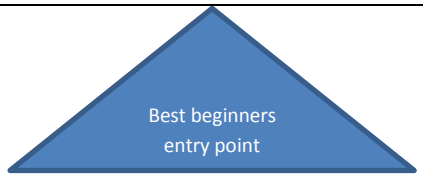
As you want to try and develop this willingness to let go of the bow grip, you need to get the reassurance of having a sling in place.

As they are relatively cheap it is recommended that you get one as soon as you can.

Finger slings can be a bit fiddly to put on but probably provide more reassurance value as you can feel them in place. Wrist slings stay on the bow so are easier to put on and harder to loose.

The choice between the two is somewhat personal. I suggest you try both and see what works for you. You will see both in use amongst the clubs members.

Low end example	Mid-Range Example	High end Example
 Simple finger slings ~£1.5-£3		 Wrist slings ~£5-£15



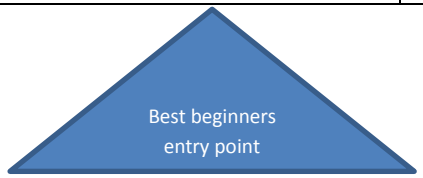
Clicker

One of the biggest variables in your early archery career is the consistency of how far you draw and especially the draw length when you actually release the string. The further you draw, the more energy goes into the arrow and all other things being equal the higher up the target the arrow will hit. So consistency in draw length helps get your groups smaller.

A clicker is a device that allows you to set a consistent draw length and to be able to see when you have reached it. Typically an arm sits over the arrow helping to hold it in place on the rest. When the arrow point is pulled back far enough the clicker arm flips out of the way and makes a distinctive clicking sound. This is the signal that the arrow has been drawn to the correct distance.

Advice on when to start using a clicker ranges from 'never in the first 6 months of shooting' to as soon as you get your own equipment. Personally I think it depends on how confident you are with the basic shot. If you're getting reasonable groups on a consistent basis then it's worth trying to use a clicker. The worst that can happen is that you decide to take it back off your bow for a while.

Low end example	Mid-Range Example	High end Example
		
Very basic arm clicker ~£3-£6	Premium brand standard clickers £8-£12	More complex clickers that mount behind the sight or have fine adjustments £12-£32

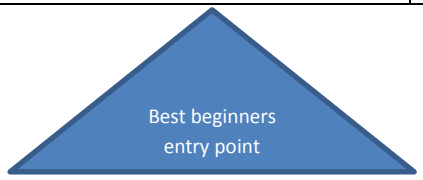


Brace Gauge

A Brace gauge is a key tool that you will use over and over in the bow tuning process. It is also useful just to confirm that a couple of key tuning measurements have not changed (always a worry when you unexpectedly start shooting badly).

As it will rattle around in your bag, get dropped and stood on its worth selecting one on the basis of robustness if you get the opportunity. Other than the quality of materials and the string clip design there is little to choose between them.

Low end example	Mid-Range Example	High end Example
 Standard gauge ~£4-£7		



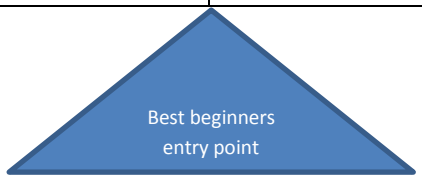
Chest Guard

You will probably notice that the vast majority of experienced archers wear a chest guard. It is mostly there to stop the string catching on clothing and being deflected or losing energy (causing the arrows to drop lower on the target). The chest guard helps hold loose clothing and parts of your anatomy out of the way and gives the string a smooth and consistent surface to slide across reducing the drag effect.

They can have a surprising effect on the consistency of your shot, even when you have not really noticed any string contact.

You do need to select a size and a left or right handed version though as it covers the chest on the bow hand side of your body. If you get the chance try different designs out for fit.

Low end example	High end Example
	
Basic budget models ~£4-£6	Branded versions ~£8-£15



Optional additional Equipment

Fletching Jig

Fletching jigs allow you to position the vanes consistently and to hold them in place whilst the glue initially sets. You are potentially going to want to use a jig if:

- You are using glued on vanes
    - The alternative is to use spin wing type vanes which are stuck on with tape and don't really require a jig (although the simple type does make marking the arrows easier than by hand)
- You have to repair the odd vane (which you will, and probably every few practice sessions).
- You decide to fletch a complete set of arrows. E.g. if you are making your own new set of arrows up.

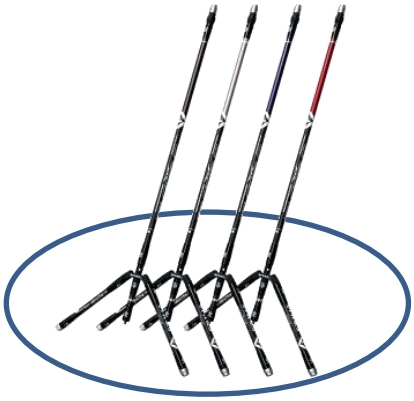
With a bit of time and patience you can get away with a single vane jig quite happily. Anything more only really helps when you're making up new arrows where 3 at once would save you some time. Either way making up a set of arrows is several hours of work.

Don't forget that you will also need fletching glue (or superglue) to stick the vanes on. Some spare vanes will also be a good idea.

Low end example	Mid-Range Example	High end Example
		
Simple fletching jig allowing one vane to be positioned at a time ~£18-£30	3 vanes at once fletching jig ~£50-£65	6 vanes at once multi arrow jig ~£100-£105

Best beginners entry point

Stabiliser Side Bars



When we say side bars what we actually mean is all the bits necessary to have the two weight rods that stick out to the side of the long rod.

In terms of what make and type you choose it's likely to be the same as the choice you made for the long rod so that it looks like a matching set. However you are not forced to have the same – pretty much all of the makes use the same screw in attachment method, so you could potentially mix and match. Just check before you buy that it is all compatible.

So why have the side rods? There are two basic reasons.

1) The long rod helps to damp out up/down and left/right movement of the bow. The side rods help to damp out or reduce rotation of the bow around the direction of the arrow shaft.
2) The weights on the rear of the side rods can help to bring the centre of gravity of the overall bow and stabilisers back towards the archers hand.

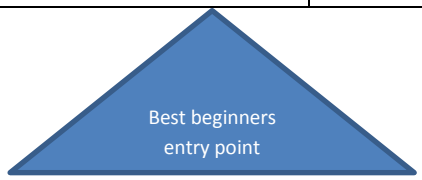
When you first start out your unlikely to feel either of these benefits in your shot, but you will probably notice the extra weight. Therefore there is no great rush to get the side rods on day one. However if you buy a full system in one go you may get a small discount overall and at least when you will benefit from the side rods they won't be out of stock or worse discontinued!

So what do you actually need?

- An extender rod – this is a 3 or 4 inch long rod that fits on the bow handle.
- A V block – this fits on the extender rod and provides the holes for the two side rods and the long rod to fit.
- Two side rods – and you will have a choice of length. Longer lengths provide more damping of movement, but they are heavier and if they get too big can mean you need more room on the shooting line. Most adults stick to ~10-12 inch side rods.
- Weights – you can add extra weights to the end of the side rods to get the exact weight and balance of stabiliser that suits you. You may get a few weights as part of the side rod package, or you may have to purchase them separately.

To minimise your costs why not have a go with the club stabiliser set and figure out what weights/lengths suit you best.

Low end example	Mid-Range Example	High end Example
		
~£6-£10 Extender ~£7-£10 V-bar ~£13-£25 Side Bar (each) Complete systems including long rod start at ~£40	~£10-£3 5 Extender ~£10-£35 V-bar ~£25-£45 Side Bar (each)	~£35-£45 Extender ~£35-£50 V-bar ~£45-£85 Side Bar (each) Complete systems including long rod go up to ~£430



Target Boss

If you have the room and a safe environment you might be thinking about getting a target boss for use at home.

Before you do though please, please consider the safety aspect. We all have bad shots and we all miss the boss on occasion. Skill and experience just help to reduce how often and by how much.

So start with an assumption that you will miss. Can you be sure that the arrow will not end up in your neighbours garden or cat (yes you can google that and find the evidence)?

Only if you are sure you can put the boss in a safe place should you consider getting one.

Personally I have mine in a corner of the garage. If I miss I will break an arrow, take a chunk out of the brick wall and I will probably have to quickly hide the evidence to save embarrassment. But I won't injure anything except my own pride! It also has the advantage that I stay dry and warmish in the winter months.

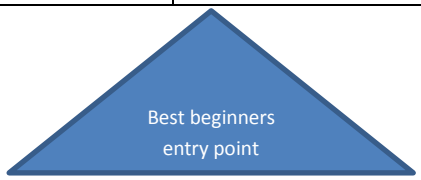
For practice on form and technique you can easily get away with practice distances of 3 to 5 meters. Don't aim to shoot further unless you can do so safely.

So, now let's consider the types of bosses. There are three basic standards you can consider for home use.

1) The traditional straw boss. It will last you a number of years even with regular use but they weigh a lot, are hard to manhandle onto a boss by yourself and can be difficult to remove arrows from if your shooting by yourself. Also they are not cheap. There are also much cheaper and lighter weight straw mats. These are quite frankly only of any use with the lowest poundage recurve bows and if possible avoided due to the risk of shoot through.
2) A Foam Layer boss. These are probably the most common choice for our club members. They can be relatively low cost and last quite well for most types of use. Over time the foam layers can get pushed back and eventually the strapping bands will give a little and benefit from a bit of 'packing' to tighten it all up again. The more expensive varieties have features keeping the foal aligned, allowing blocks of foam to be replaced the tension on the foam to be altered. I managed to wear out a simple banded 60cm target in a year, shooting 3 or 4 nights a week with both a both compound and recurve bow. A 90cm target looks like it will last me a couple of years or more due to the increased area available for use. They have very good stopping power and are light enough for one person to move when necessary.
3) Target bags and foam blocks are the one type of target I have no experience with – sorry but I can't provide any guidance here other than to say that they are generally rated as capable for higher power bows by the manufacturers.

You generally have a choice of sizes as well. Remember that bigger targets are harder to miss but cost and weigh more, as well as occupying more space in the garage, garden or shed.

Low end example	Mid-Range Example	High end Example
  The target bags and light weight straw mats occupy the bottom price band. Avoid the mats if you can as they have inferior stopping power. ~£20-£50	  Layered foam bosses – variety of sizes (60,90, 130cm). Typically compressed by packaging straps. Traditional straw boss. ~£60-£160	  Full size targets suitable for 122cm faces, some feature high durability centres and replaceable centre blocks ~£220 - £440



Telescope/Binoculars

You will not need to invest in a scope or binoculars unless you're really serious about competing at longer distance competitions.

Your options are to take that old pair of binoculars out of the cupboard and make do with them for a while. Certainly for the indoor season when you're just trying to see your arrows at 18m they are more than sufficient.

Outdoors at longer distances binoculars pretty much run out of steam though. The limiting factor is typically how still you can hold them.

For that reason if you ever watch a competitive shoot, and more often than not at our outdoor practice sessions someone will have set up a scope on a tripod to be able to see where their arrows have landed.

The reason is fairly simple. At the start of a competition you get 6 arrows of 'sighters'. These are your chance to see what the wind and other weather conditions have done to your arrow flight.

Whilst you may have a good idea of where to set your sights from practice sessions they do typically require some adjustment on the day (and even during the day when the wind changes). If you can't see where your arrows have actually gone until you walk down and see all 6 you then have to 'guess' how much to change the sights and then shoot the next 6 to see if you guessed right.

If you have a scope you could shoot 3, check the group position and then adjust and shoot again. You might not have it right at that point but at least you have some idea of how much your sight adjustment effected the arrow position.

The down side to a scope is you tend to look too often. It is very easy to fall into the trap of adjusting your sight based on one bad shot. You really need to shoot enough arrows to get a group, only then will you know if the sight needs adjusting. When you first start out you will need 6 shots to get this group picture. Not having a scope actually helps you to just shoot the same each time and not worry about where they actually hit.

It's a very rare thing for archers with scopes to be unwilling to share them in a competition so often you won't need to use your scope even if you own one!

OK, so let's assume you now want a scope anyway (if only because everyone else has one). What should you look for?

Unfortunately this is one piece of equipment where quality (and therefore cost) do tend to count, particularly for the longest distance shoots (100 yrds) when you're trying to pick out your arrows from the other 18 based purely on the nock colour and fletchings.

Here are the key features you need to consider.

- The size of the scope aperture determines how much light gets in and therefore how clear the image is. Bigger is better. Over 80mm is excellent.
- Ideally you want a zoom adjustment (rather than a fixed zoom) to allow you to get the right size picture across the widest range of target distances. 60X zoom is all you need for the

longest distances. Down to 20X will let you see all of the closest targets at which you can't just as easily use the naked eye. So 20-60X zoom gives you the full range.

- The quality of the lenses also makes a huge difference. If you pay £30 you will most likely get an image that still leaves you guessing which arrow is yours. If you pay closer to £400 you expect to see the fly sitting on the back of the nock!
- Make sure the scope has a suitable tripod mounting point (which they almost certainly will).
- Lens caps are also a real advantage in the rain when you just want to have a quick look then recover the lenses.
- Just note that for more expensive scopes you may have to buy the eyepiece separately to the scope body. Just make sure you know you're buying a complete scope set up.

You really need to look through a few scopes to appreciate the difference you get with the more expensive options. You then have to balance what price/performance point suits your budget best. Its best to go for a proper scope if you can.

Ask to try some of the scopes regularly in use on practice nights.

One good online retailer is www.uttings.co.uk who generally have a much wider range on offer than the archery shops. There are also plenty of other web retailers so find something you like the look of and then shop around.

Low end example	Mid-Range Example	High end Example
		
Simple hand held scopes, various zoom levels & up to 50mm aperture ~£20-£50	Budget to mid-range scopes ~ 60mm aperture and different zooms, (occasionally available at the likes of Aldi for £30-£50, but more often priced ~£50-£300 from web retailers	High end quality branded scopes ~82mm aperture, 20-60 times zoom [20-60X82]. Several members of the club have these scopes (example shown is a Nikon). ~£300+

Tripod

A tripod is necessary to hold a decent scope. The requirement is fairly simple; it needs to hold the scope still and have easy adjustments for rotation, tilt and height.

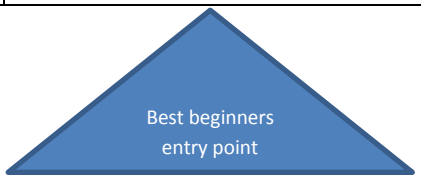
You will find a number of options available from really very cheap plastic legged tripods to expensive heavy all metal designs.

Where the quality and cost really make a difference is in the stability of the tripod when conditions get a bit windy. Cheaper and flimsier tripods allow the scope to vibrate and bounce around, making it very difficult to see which arrows are yours even if you have a very good quality scope. An expensive heavy tripod may allow the scope to sit there with minimal vibration but you are also going to have to lug all that extra weight around every time you use it.

My experience has been that the very cheap tripods are really neither use nor ornament. The slightest wind or touch sends the scope image twitching and you will quickly get frustrated, particularly if your scope is going to be used above 40* magnification. Spending a little more is probably a good investment if you have already invested in a decent quality scope.

Also if you are planning on entering any competitions make sure that you can tie the tripod down with a bungee cord or rope to a tent peg in the ground. If you can't you may not be allowed to use it in windy conditions. A hook point or tied down ring is a good thing to check for.

Low end example	Mid-Range Example	High end Example
 Light weight plastic tripod ~£10-£30	 Higher quality tripods with heavier gauge plastic construction ~£30-100	 Heavy weight and very rigid tripod (most likely of metal construction) with quick release attachment for the scope ~£100-£300+



Appendices

Appendix 1: Considerations when building your own arrows

The other choices you will have to make on arrows other than the length, spins and shaft type are around fletching (flights), nocks and points.

Fletching – you need just enough to steer the arrow but not too much drag in order to preserve speed and range.

- Indoors that means you want bigger flights, 1 ¾ inches up to 4 inches. You can use plastic vanes or feather. Bigger vanes help the arrow stabilise quicker over the shorter range.
- Outdoors you want smaller flights 1 ½ to 2 inches is normal as drag is a more critical parameter.

Fletching type is a personal choice and there are two main groups

- Standard vane fletches come by default on most complete arrows offered by the archery shops. They are perfectly adequate for most levels of archer. They are fairly robust but ideally for making repairs or initial fletch fitting you need a fletching jig. Very steady hands and the patience of a saint also work, but not as well. They are fitted with glue, so you need either specialist fletching glue or I have found super glue works although it is harder to remove when you do need to do repairs.
- Curly or spin wing style vanes encourage the arrow to spin and this is supposed to provide more stability in flight. As the majority of world class archers use this type for long range archery it is the style you find most of the club senior archers have adopted. They can however be more damage prone than the plastic flat vanes so expect to spend a little more time repairing. The upside is that a fletching jig is not an essential item to fit and repair them as they are stuck down with a double sided tape that comes in the pack.

Fletchings will need repair, whichever type you choose. They will get damaged in use so make sure you get some spares at the time you get your arrows.

Nocks – unfortunately come in different designs and sizes to match different arrow types and string thicknesses which makes this far more difficult than it could be. The naming convention is also not very helpful.

- If you're buying fully assembled arrows at the same time as you buy a string ask the shop to make sure they are compatible and save yourself the hassle. However if you making the selection yourself feel free to read on.
- Nock groove size - You really want the size that snaps firmly onto the string without a risk of it falling off when you draw. You don't however want it to grab on for dear life as it won't want to let the arrow leave the string.
    - For most recurve strings the small groove size is about right. You can also get large groove nocks. Unfortunately many brands of nock are not helpful enough to tell you which size they are. You often have to resort to looking at the picture

and comparing it to one that has given the information. Even better – take your string to the shop and try them.